Common paths to ASD severity and PTSD severity

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Introduction

Numerous studies have investigated the prediction of acute and long-term posttraumatic symptoms following traumatic exposure. As a result several factors have been shown to be predictive of both acute stress disorder (ASD) and posttraumatic stress disorder (PTSD). Furthermore, research suggests a strong relationship between ASD severity and subsequent PTSD severity. However, little is known in relation to whether there are common pathways to the development of ASD and PTSD.

Peritraumatic responses and cognitions are found to be associated with both the development of ASD and PTSD, thus a common pathway to the development of posttraumatic symptoms may lie in these. Thus, the current study implements structural equation modeling (SEM) to examine the role of selected peritraumatic factors and cognitive factors on the development of ASD and PTSD symptoms in a national study of Danish bank robbery victims. Fig. 1 shows the conceptual model of the investigation of common paths to ASD and PTSD.

Method

Sample: national longitudinal questionnaire survey of all Danish bank employees exposed to bank robbery from April 2010 to April 2011 (N = 450, response rate = 73.3 %).

T1 – one week after the robbery: Control factors (age, sex, prior traumatic exposure, prior robberies), risk factors (negative cognitions about bodily sensations [i.e. anxiety sensitivity], peritraumatic panic, tonic immobility, peritraumatic dissociation, negative cognitions about self and negative cognitions about world).

Dependent factor: ASD severity.

T2 – six months after the robbery: Dependent factor: PTSD severity.

SEM was used to test for common paths to ASD severity and PTSD severity. The analyses were carried out using Mplus.

Results

Numerous path models with various combinations of constraints from a baseline model with no constraints to a fully constrained model (a=b, c=d, e=f, g=h, i=j, k=l, m=n, o=p, q=r, s=t) were tested. The model fit statistics were acceptable for most of the models.

Table 1 shows the regression coefficients (β) for the significant risk factors of short-term and long-term posttraumatic symptoms for the best fitted model (constraints; a=b, c=d, e=f, g=h, i=j, k=l, m=n, o=p, q=r, s=t). A total of 74 % of the variance in ASD severity and 53 % of the variance in PTSD were explained by the model.

Discussion

The finding that female sex, prior robbery exposure, anxiety sensitivity, peritraumatic panic, and negative cognitions about self are significant common risk factors of both ASD severity and PTSD severity is in accordance with previous research. However, as far as we know no studies has previously assessed this combination of risk factors in relation to both ASD and PTSD at the same time.

Negative cognitions about self were the strongest common risk factor. This is in accordance with previous research showing that cognitive models are better predictors of posttraumatic stress symptoms than empirically derived generic variables. It is also in accordance with research showing that negative cognitions about self seem to have a more pivotal role in the development of posttraumatic stress symptoms than other forms of cognitions.

However, in contrary to previous research peritraumatic dissociation was not a significant risk factor of PTSD severity whilst controlled for the other factors. However, this is in accordance with a review (van der Velden & Wittmann, 2008) showing that peritraumatic dissociation is not an independent predictor of PTSD, but that the relationship between peritraumatic dissociation and PTSD tends to become non-significant when controlling for other factors.

Limitations

The current study is subjected to a number of limitations. For instance it was only possible to assess the participants twice. Thus, the study is cross-sectional in relation to ASD and interpretations about causality should be done carefully. Several of the scales were translated into Danish. Thus, the psychometric properties of the original English scales cannot necessarily be transferred to the Danish versions.

Conclusion

Despite its limitations, the current study is only study which has investigated common paths to short-term and long-term posttraumatic symptomology through peritraumatic factors and different forms of negative cognitions.

Results show that there appear to exit common paths to ASD severity and PTSD severity through female sex, prior robbery exposure, negative cognitions about bodily sensations, peritraumatic panic, and negative cognitions about self. Future research should focus on replicating these results across different trauma populations as they point to possible areas of preventive intervention.